

[3410-11-P]

### DEPARTMENT OF AGRICULTURE

**Forest Service** 

RIN 0596-AC82

**Ecological Restoration Policy** 

**AGENCY:** Forest Service, USDA.

**ACTION:** Notice of proposed directive; request for comment.

Restoration Policy in Forest Service Manual (FSM) 2020. The proposed directive would provide broad direction for restoring National Forest System lands and associated resources to achieve sustainable management and ecological integrity. This policy would recognize the adaptive capacity of ecosystems, the role of natural disturbances, and uncertainty related to climate and other environmental change. On September 22, 2008, the Forest Service issued an interim directive, FSM 2020 Ecological Restoration and Resilience. The interim directive was reissued on March 3, 2010, a third time on August 30, 2011, and a fourth time on May 13, 2013, and is now proposed as permanent policy.

**DATES:** Comments must be received in writing by [Insert date 60 days after the date of publication in the FEDERAL REGISTER].

ADDRESSES: Submit comments through the World Wide Web/Internet website <a href="http://www.regulations.gov">http://www.regulations.gov</a>. Alternately, submit written comments by addressing them to Forest Service Restoration Directive, c/o Jim Alegria, Forest Management Staff, USDA Forest Service, Mailstop 1103, 1400 Independence Avenue, SW., Washington, DC

20250, or by facsimile to 202-205-1012. Please identify your written comments by including "Restoration Directive" on the cover sheet or first page. Electronic comments are preferred. For comments sent via U.S. Postal Service, please do not submit duplicate electronic or facsimile comments. Please confine comments to the proposed directive on the Ecological Restoration and Resilience Policy.

All comments, including names and addresses, when provided, are placed in the record and are available for public inspection and copying. The public may inspect comments received on the internet at <a href="http://www.fs.fed.us/restoration/index.shtml">http://www.fs.fed.us/restoration/index.shtml</a>.

FOR FURTHER INFORMATION CONTACT: Jim Alegria, Forest Management Staff, USDA Forest Service, Mailstop 1103, 1400 Independence Avenue, SW.,

Washington, DC 20250, 202-205-1787. Individuals who use telecommunications devices for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1-800-877-8339 between 8:00 a.m. and 8:00 p.m. Eastern Standard Time, Monday through Friday.

#### **SUPPLEMENTARY INFORMATION:**

# **Background and Need for the Directive**

The need for ecological restoration of many areas in the National Forest System is widely recognized, and the Forest Service has conducted restoration-related activities through many resource management programs for decades. However, an internal agency study (<a href="http://www.fs.fed.us/restoration/documents/RestFramework\_final\_010606.pdf">http://www.fs.fed.us/restoration/documents/RestFramework\_final\_010606.pdf</a>) identified that the concept of ecological restoration has not been well understood nor consistently implemented within the agency. The Agency believes that a foundational, comprehensive policy and definitions would help it to use ecological restoration more effectively as a tool for achieving land management objectives on national forests and

grasslands.

The Forest Service proposes to amend its directives by establishing a new title in the Forest Service Manual, FSM 2020: Ecological Restoration . The proposed directive would establish broad, foundational policy for restoration of National Forest System lands and resources. The intent is to provide a clear, comprehensive, and science-based restoration policy to guide achievement of sustainable management and ecological integrity under changing environmental conditions, such as those driven by a changing climate and increasing human uses.

Restoration is the process of assisting the recovery of ecosystems that have been damaged, degraded, or destroyed. Ecological restoration re-establishes the composition, structure, and/or ecological processes that support sustainable aquatic and terrestrial ecosystems. In order to identify an ecosystem in need of restoration, current conditions should be evaluated against: the natural range of variation as a reference to understand ecosystem function; the dynamic nature of ecosystems, associated natural and current disturbance regimes; and likely future environments resulting from climate change and increasing human uses. Although this proposal is to establish a restoration policy on National Forest System lands and resources, there may be some situations where ecosystems have been so degraded that restoration may not be feasible or economically possible.

The proposed directive applies to all National Forest System's resource management programs. For example, this directive would apply when there is an objective to restore watershed condition and function, control invasive species, re-create natural stream channel complexity, improve or reestablish habitat for threatened and

endangered species, and restore natural fire regimes.

The Forest Service has a multiple-use mission and not all management activities on national forests and grasslands require a restoration objective. The Agency will continue to support management activities such as energy development, recreation use, grazing and timber production conducted in an ecologically sustainable manner to avoid the need for ecological restoration in the future. For example, vegetative treatments in the Wildland Urban Interface that are necessary to effectively reduce fire risk to communities may require a silvicultural treatment that would not be viewed as ecological restoration. Rather, the vegetative treatments would address the objective of reducing the risk of harm to people, property and forest resources due to wildfire. Water structures for range management will continue to be developed to sustain livestock and reduce risk to riparian systems. The directive would amend the Forest Service Manual to include a definition for the term restoration, or ecological restoration. The more generic term restoration has been used widely by the Forest Service and other agencies beginning with the National Fire Plan Cohesive Strategy adopted in 2001, and the 10-Year Comprehensive Strategy and Implementation Plan. The term restoration and associated concepts such as reforestation, resilience, and adaptation, are increasingly used by the Congress, media, stakeholders, general public, scientific community, and leaders, including the Secretary of Agriculture and the Chief of the Forest Service, in their public statements. The directive primarily serves to improve understanding of the term by Forest Service employees, partners, and the public, by clarifying the purpose behind it, as well as its scope and context. This improved understanding will allow the Forest Service to communicate ecological restoration needs more effectively at the local, regional, and

national levels.

The policies and ecological principles in this proposed directive are consistent with those in the Forest Service's 2012 Land Management Planning Rule (planning rule). The proposed directive would reinforce the use of adaptive management, scientific information, and collaboration in agency planning and decision-making. The Forest Service twice asked for public comment on the concept and definition of restoration in developing the planning rule, with the release of the Notice of Intent to prepare an environmental impact statement (EIS) for a new rule (December 18, 2009) and again with release of the proposed rule (February 14, 2011). Some public comments stated that the term "restoration" needed to be defined. Most respondents who cited the Forest Service definition in the FSM 2020 interim directive generally agreed with it. Others did not agree with the Forest Service definition and offered new definitions. This proposed directive would adopt the definition of restoration from the 2012 planning rule (April 9, 2012) for FSM Chapter 2020 – Ecological Restoration. Definitions for other terms proposed for FSM 2020.-5 are from the 2012 planning rule, Agency National Environmental Policy Act (NEPA) regulations, and other sources.

#### **Interim Directive**

In 2008, the Chief of the Forest Service determined that a national policy on ecological restoration was needed to ensure a consistent and cohesive approach to restoring the ecological integrity of forest and grassland ecosystems. Since then, the Forest Service has been using an interim directive that lays out an operational definition for "ecological restoration." This interim directive has been in place since September 22, 2008, and was reissued on March 3, 2010. It was reissued a third time on August 30,

2011, and a fourth time on May 13, 2013. The interim directive expires on November 13, 2014.

# **Regulatory Certification**

# Environmental Impact

The proposed directive establishes broad, foundational policy for restoration of National Forest System lands and associated resources. The Agency procedure at 36 CFR 220.6(d)(2) excludes from documentation in an environmental assessment or environmental impact statement "rules, regulations, or policies to establish Service-wide administrative procedures, program processes, or instructions." This proposed directive constitutes a policy to establish Service-wide administrative procedures, program processes, or instructions consequently the Agency has concluded that the proposed directive falls within the category of actions in 36 CFR 220.6(d)(2) and that no extraordinary circumstances exist which would require preparation of an environmental assessment or environmental impact statement.

# Regulatory Impact

This proposed directive has been reviewed under USDA procedures and Executive Order 12866, Regulatory Planning and Review. It has been determined that this is not an economically significant action. This action would not have an annual effect of \$100 million or more on the economy nor adversely affect productivity, competition, jobs, the environment, public health or safety, nor state or local governments. This action would not interfere with an action taken or planned by another agency. This action would not alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients of such programs. However, because of the extensive

interest in the management of National Forest System land, this proposed agency directive has been designated as significant and, therefore, is subject to Office of Management and Budget review under Executive Order 12866.

In accordance with OMB circular A-4, "Regulatory Analysis," a cost/benefit analysis was conducted. The analysis compared the costs and benefits associated with the "no action" alternative of not having an agency policy and the alternative of adopting the proposed ecological restoration policy. Many benefits and costs associated with the proposed agency policy are not quantifiable. Benefits include providing consistent and uniform understanding and Service-wide application of restoration policies, principles, and terminology; increasing agency effectiveness when planning and implementing restoration activities; and fostering better understanding and collaboration among interests from local to national levels. It is anticipated that the proposed directive would reduce costs by providing clear policy, definitions, and principles of ecological restoration and reducing ad hoc or inconsistent interpretation of terminology and policy.

This directive has been reviewed in light of the Regulatory Flexibility Act, as amended (5 U.S.C.601 *et seq.*), and it has been determined that this action will not have a significant economic impact on a substantial number of small entities as defined by that Act. A threshold regulatory flexibility analysis is not required under the Regulatory Flexibility Act because this directive is broad agency policy that imposes no impacts or requirements on small or large entities. The directive will increase agency effectiveness when planning and implementing restoration activities at the local level.

#### Federalism

The Agency has considered this proposed directive under the requirements of <a href="Executive Order 13132"><u>Executive Order 13132</u></a>, Federalism. The Agency has concluded that the proposed directive conforms with the federalism principles set out in this Executive order; will not impose any compliance costs on the States; and will not have substantial direct effects on the States or the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, the Agency has determined that no further assessment of federalism implications is necessary.

Consultation and Coordination with Indian Tribal Governments

Pursuant to Executive Order 13175 of November 6, 2000, "Consultation and Coordination with Indian Tribal Governments," Tribes were invited to consult on the proposed directive prior to review and comment by the general public. The consultation process was initiated through written instructions from the Deputy Chief for the National Forest System to the Regional Foresters and subsequently to the Forest Supervisors. Upon request from Tribes, formal consultation was conducted by the Forest Supervisors and/or District Rangers with assistance from staff. Tribal comments were submitted to the Washington Office staff designated as lead for this proposed policy.

A limited number of responses were received during the course of the 120-day consultation period, and used in the formulation of policy or otherwise considered.

Comments were in support of the directive. Some expressed the opinion that the directive did not represent any change from current Agency practices. One comment suggested that the ecological restoration policy should include identification and removal of

stressors (often human uses) as part of any restoration activity. The suggestion was incorporated into the policy section at 2020.3.

Implementation of this directive primarily occurs at the local level (national forest or grassland unit) through land management planning and project-level planning and accomplishment. When local actions are initiated, another level of consultation would occur among Tribes and forest and grassland units because it is at that more local level that site-specific ecological restoration goals and objectives are established. Also, at that level the design and effects of restoration activities are most effectively managed in relation to the Agency's tribal trust responsibilities and Indian tribal treaty rights to assure Tribal interests are respected.

The proposed directive establisheses broad, foundational policy for ecological restoration of National Forest System (NFS) lands and associated resources but does not directly affect the occupancy and use of NFS land. The Agency has assessed the impact of this proposed directive on Indian Tribes through Tribal consultation and has determined that it does not have substantial direct or unique effects on one or more Indian Tribes, on the relationship between the Federal Government and Indian Tribes, or on the distribution of power and responsibilities between the Federal Government and Indian Tribes. The Agency has also determined that this proposed directive does not impose substantial direct compliance costs on Indian tribal governments or preempt tribal law. *No Takings Implications* 

This proposed directive has been analyzed in accordance with the principles and criteria contained in Executive Order 12630, Governmental Actions and Interference with

<u>Constitutionally Protected Property Rights</u>, and it has been determined that the proposed directive does not pose the risk of a taking of protected private property.

# Civil Justice Reform

This proposed directive has been reviewed under Executive Order 12988 "Civil Justice Reform." After adoption of this proposed directive, (1) all state and local laws and regulations that conflict with this proposed directive or that would impede full implementation of this directive would be preempted; (2) no retroactive effect would be given to this proposed directive; and (3) the proposed directive would not require the use of administrative proceedings before parties could file suit in court challenging its provisions.

# **Unfunded Mandates**

Energy Effects

Pursuant to Title II of the Unfunded Mandates Reform Act of 1995 (2 U.S.C. 1531-1538), signed into law on March 22, 1995, the Agency has assessed the effects of this proposed directive on State, local, and Tribal governments and the private sector. This proposed directive does not compel the annual expenditure of \$100 million or more by any State, local, or Tribal government in the aggregate or by anyone in the private sector. Therefore, a statement under section 202 of the act is not required.

This proposed directive has been reviewed under Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use. It has been determined that this proposed directive does not constitute a significant energy action as defined in the Executive order.

Controlling Paperwork Burdens on the Public

This proposed directive does not contain any additional record keeping or reporting requirements or other information collection requirements as defined in 5 CFR part 1320 that are not already required by law and already approved for use, and, therefore, imposes no additional paperwork burden on the public. Accordingly, the review provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*) and its implementing regulations at 5 CFR part 1320 do not apply.

#### FOREST SERVICE MANUAL

The Forest Service is seeking comment on the proposed policy being established in Forest Service Manual 2020 as follows:

### CHAPTER 2020 – ECOLOGICAL RESTORATION

FSM 2020 provides foundational policy when ecological restoration is employed to manage National Forest System lands. This directive reaches across all program areas and activities applicable to management of National Forest System lands and resources so as to ensure integration and coordina0tion at all levels and within all organizational units.

### *2020.1 – Authority*

The authority for restoring National Forest System lands derives from many laws enacted by Congress that define the purpose of national forests and grasslands. These are cited throughout the Forest Service Manual and Handbooks. FSM 1010 lists the most significant laws and provides guidance on where to obtain copies of them.

The history of Federal policies, treaties, statutes, court decisions, and Presidential direction regarding Indian Tribes and tribal rights and interests is extensive. FSM 1563.01a through 1563.01i set out the legal authorities relevant to

Forest Service relationships with Tribes.

The President issued direction through several Executive orders relevant to protection of resources or restoration of ecosystem processes and functions. Also, numerous regulations governing the sustainable management and restoration of National Forest System lands are found in the Code of Federal Regulations under Title 36, Chapter II, Parts 200-299.

### 2020.11 – Laws

The principal statutes governing the management and restoration of National Forest System lands include, but are not limited to, the following statutes. Except where specifically stated, these statutes apply to all National Forest System lands and resources.

- 1. Organic Administration Act (at 16 U.S.C. 475, 551). States the purpose of the national forests, and directs their control and administration to be in accord with such purpose, that is, "[n]o national forest shall be established, except to improve and protect the forest within the boundaries, or for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber for the use and necessities of citizens of the United States." Authorizes the Secretary of Agriculture to "make such rules and regulations . . . to preserve the [national] forests from destruction."
- 2. Weeks Act, as amended (at 16 U.S.C. 515, 552). Authorizes the Secretary of Agriculture to enter into agreements with States for the purpose of conserving forests and water supply, and to acquire forested, cutover, or denuded lands within the watersheds of navigable streams to protect the flow of these streams or for the production of timber, with the consent of the State in which the land lies.

- 3. <u>Knutson-Vandenberg Act</u> (16 U.S.C. at 576b). Specifies that the Secretary may require any purchaser of national forest timber to make deposits of money in addition to the payments for the timber, to cover costs incurred to the United States. These costs include planting, sowing with tree seeds, and cutting, destroying, or otherwise removing undesirable trees or other growth, on the national forest land cut over by the purchaser. The monies are used to improve the future stand of timber, or to protect and to improve the future productivity of the renewable resources of the forest land in such sale area.
- 4. Anderson-Mansfield Reforestation and Revegetation Joint Resolution Act of 1949 (at 16 U.S.C. 581j and 581 j(note)). States the policy of the Congress to accelerate and provide a continuing basis for the needed reforestation and revegetation of national forest lands and other lands under Forest Service administration or control, for the purpose of obtaining stated benefits (timber, forage, watershed protection, and benefits to local communities) from the national forests.
- 5. Granger-Thye Act (16 U.S.C. at 580g-h). Section 12 authorizes the Secretary to use a portion of grazing fees for range improvement projects on NFS lands. Among the specific types of projects mentioned are artificial revegetation, including the collection or purchase of necessary seed and eradication of poisonous plants and noxious weeds, in order to protect or improve the future productivity of the range (16 USC 580h). Section 11 of the Act authorizes the use of funds for certain types of rangeland improvement projects outside of NFS lands under certain circumstances (16 USC 580g).
- 6. <u>Sikes Act (16 U.S.C. at 670g)</u>. Section 201 directs the Secretary of Agriculture, in cooperation with State agencies, to plan, develop, maintain, coordinate,

and implement programs for the conservation and rehabilitation of wildlife, fish, and game species. Such programs include specific habitat improvement projects on public land under the Secretary's jurisdiction.

- 7. Multiple-Use Sustained-Yield Act of 1960 (16 U.S.C. 528-531). States that the National Forests are to be administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes, and adds that the establishment and maintenance of wilderness areas are consistent with this Act. This Act directs the Secretary to manage renewable surface resources of the national forests for multiple use and sustained yield of the several products and services obtained therefrom. Multiple use means the management of all the various renewable surface resources of the national forests in the combination that will best meet the needs of the American people; providing for periodic adjustments in use to conform to changing needs and conditions; and harmonious and coordinated management of the resources without impairment of the productivity of the land. Sustained yield of the several products and services means achieving and maintaining in perpetuity a high-level annual or regular periodic output of renewable resources without impairment of the productivity of the land.
- 8. Wilderness Act (16 U.S.C. 1131 et seq.). Requires the Secretary of Agriculture to administer certain congressionally designated National Forest System lands as wilderness. The Act directs the protection and preservation of wilderness areas in their natural state, primarily affected by nature and not man's actions. The Act allows certain management actions that would otherwise be prohibited in wilderness "as necessary to meet minimum requirements for the administration of the area for the purpose of the Act," and also provides that "such measures may be taken as may be

necessary in the control of fire, insects, and diseases, subject to such conditions as the Secretary deems desirable. " 16 U.S.C. 1133 (c),(d).

- 9. Wild and Scenic Rivers Act (16 U.S.C. 1271 -1287). Establishes the National Wild and Scenic Rivers System, and policy for managing designated rivers and designating additions to the system. The Act prescribes for designated rivers and their immediate environments the protection and enhancement of their free-flowing character, water quality, and outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values. Streams eligible for inclusion in the system must be in free-flowing condition or have been restored to this condition. The Act authorizes the Secretary of Agriculture to plan for, protect, and manage river resources, and take such actions as necessary to protect rivers in accordance with the act, including cooperating with EPA and the appropriate State water pollution control agencies for the purpose of eliminating or diminishing the pollution of waters.
- 10. National Environmental Policy Act of 1969 (NEPA) (16 U.S.C. 4321 et seq.). Declares it is the policy of the Federal Government to encourage a "productive and enjoyable harmony between humans and their environment," and fulfill the social, economic, and other requirements of present and future generations of Americans. The Act requires agencies proposing major federal actions significantly affecting the quality of the human environment to prepare a detailed statement on the environmental impacts of the proposed action, unavoidable adverse environmental impacts, alternatives to the action proposed, the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity, and any irreversible and irretrievable commitments of resources which would be involved if the proposed action is

implemented. The Act also provides that for any proposal which involves unresolved conflicts concerning alternative uses of available resources, an agency must study, develop, and describe appropriate alternatives to recommended courses of action.

- 11. Endangered Species Act of 1973 (16 U.S.C. 1531-1544, as amended). States its purposes are to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, and provide a program for the conservation of such endangered species and threatened species. Federal agencies are to use their authorities in furtherance of the purposes of the ESA by carrying out programs for the conservation of threatened and endangered species. Under the Act, "conserve" means to use methods and procedures necessary to bring any endangered or threatened species to the point at which the measures provided under the Endangered Species Act are no longer necessary. Federal agencies must also ensure that their actions are not likely to jeopardize threatened or endangered species or result in the destruction or adverse modification of critical habitat designated for them.
- 12. Magnuson-Stevens Fishery Conservation and Management Act of 2006 (16 U.S.C. 1855, as amended). States each Federal agency shall consult with the Secretary of Commerce with respect to any action authorized, funded, or undertaken, or proposed to be authorized, funded or undertaken by such agency that may adversely affect essential fish habitat identified under this Act. Essential fish habitats are those waters and substrates necessary to federally managed fish for spawning, breeding, feeding, or growth to maturity.
- 13. Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974, as amended by National Forest Management Act (NFMA) of 1976 (16 U.S.C. 1600-1614,

472a). States that the development and administration of the renewable resources of the National Forest System are to be in full accord with the concepts for multiple use and sustained yield of products and services as set forth in the Multiple-Use Sustained-Yield Act of 1960. Establishes the policy of the Congress that all forested lands in the National Forest System be maintained in appropriate forest cover with species of trees, degree of stocking, rate of growth, and stand conditions designed to secure the maximum benefits of multiple use sustained yield management in accordance with land management plans. It sets forth the requirements for land and resource management plans for units of the National Forest System, including requiring guidelines to provide for the diversity of plant and animal communities based on the suitability and capability of the specific land area and within multiple use objectives.

14. <u>Clean Water Act</u> (33 U.S.C. 1251, 1254, 1323, 1324, 1329, 1342, 1344). Amends the Federal Water Pollution Control Act of 1972. The objective of the Act is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Section 313 emphasizes Federal agency compliance with Federal, State, and local substantive and procedural requirements related to the control and abatement of pollution to the same extent as required of nongovernmental entities. (33 USC 1323.)

15. Clean Air Act (42 U.S.C. 7401, 7418, 7470. 7472, 7474, 7475, 7491, 7506, 7602). Section 169 A establishes a national goal to prevent any future, and remedy any existing, visibility impairment in certain wilderness areas the Forest Service manages (42 USC 7491). It also directs the Forest Service as a Federal land manager to protect air quality related values from man-made air pollution in these same areas. Section 118 obligates the Forest Service to comply with the Act's many provisions regarding

abatement of air pollution to the same extent as any nongovernmental entity (42 USC 7418).

- 16. North American Wetland Conservation Act (16 U.S.C. 4401 (note), 4401-4413, 16 U.S.C. 669b (note)). Section 9 (U.S.C. 4408) directs Federal land managing agencies to cooperate with the Director of the U.S. Fish and Wildlife Service to restore, protect, and enhance the wetland ecosystems and other habitats for migratory birds, fish and wildlife within the lands and waters of each agency to the extent consistent with the mission of such agency and existing statutory authorities.
- 17. Healthy Forests Restoration Act (HFRA) of 2003 (16 U.S.C. 6501-6591).

  Provides processes for developing and implementing hazardous fuel reduction projects on certain types of "at-risk" National Forest System and Bureau of Land Management (BLM) lands, and also provides other authorities and direction to help reduce hazardous fuels and protect, restore, and enhance healthy forest and rangeland ecosystems.
- 18. <u>Stewardship End Result Contracting Projects</u> (16 U.S.C. 2104 (note)). Grants the Bureau of Land Management (BLM) and the Forest Service ten-year authority (to September 30, 2013) to enter into stewardship contracts or agreements to achieve agency land management goals and meet community needs.
- 19. <u>Tribal Forest Protection Act of 2004</u> (25 U.S.C. 3115a). Authorizes the Secretary of Agriculture and the Secretary of the Interior to enter into an agreement or contract with Indian tribes meeting certain criteria to carry out projects to protect Indian forest land or rangeland, including projects to restore Federal land that borders on or is adjacent to Indian forest land or rangeland.

#### 2020.12 – Executive Orders

Principal Executive orders relevant to ecological restoration are listed below.

- 1. Executive Order 11514 issued March 5, 1970, as amended by E.O. 11991, issued May 24, 1977. Protection and enhancement of environmental quality (35 FR 4247, March 7, 1970; 42 FR 26967, May 25, 1977). This order states that the Federal Government shall provide leadership in protecting and enhancing the quality of the Nation's environment to sustain and enrich human life. This order provides for monitoring, evaluation, and control on a continuing basis of the activities of each Federal agency so as to protect and enhance the quality of the environment.
- 2. Executive Order 11644 issued February 8, 1972. Use of off-road vehicles on the public lands. (37 FR 2877, February 9, 1972). Amended by E.O. 11989 issued May 24, 1977 and E.O. 12608 issued September 9, 1987. These orders require Federal agencies to develop and implement procedures that will ensure that the use of off-road vehicles on public lands will be controlled and directed so as to protect the resources of those lands, to promote the safety of all users of those lands, and to minimize conflicts among the various uses of those lands.
- 3. Executive Order 11988 issued May 24, 1977. Floodplain management (42 FR 26951 (May 25, 1977)). This order requires that each agency shall provide leadership and take action to:
  - a. Minimize adverse impacts associated with the occupancy and modification of flood plains and reduce risks of flood loss;
  - b. Minimize impact of floods on human safety, health, and welfare; and

- c. Restore and preserve the natural and beneficial values served by floodplains.
- 4. Executive Order 11990 issued May 24, 1977. Protection of wetlands. (42 FR 26961, May 25, 1977). This order requires each agency to take action to minimize destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands.
- 5. Executive Order 13112 issued February 3, 1999. Invasive Species. (64 FR 6183 (February 8, 1999)). This order requires Federal agencies whose actions may affect the status of invasive species to, among other things, respond to and control populations of invasive species and provide for restoration of native species and habitat conditions in ecosystems that have been invaded by non-native invasive species.

# 2020.2 – *Objective*

The objectives of the Forest Service Ecological Restoration policy are to:

- Reestablish and retain ecological integrity of National Forest System
  ecosystems and associated resources to achieve ecological sustainability
  and provide a broad range of ecosystem services.
- Restore and maintain resilient ecosystems that will have greater capacity
  to withstand stressors and recover from disturbances, especially those
  under changing and uncertain environmental conditions and extreme
  weather events.

### 2020.3 – Policy

1. All resource management programs have a responsibility for ecological restoration including, but not limited to, management of vegetation, water, wildland fire,

fish, wildlife, and recreation. Management activities may range from monitoring resource conditions to manipulating terrestrial and aquatic ecosystems to assist in their recovery from the impacts of human uses.

- 2. Strategic plans, including the Forest Service Strategic plan, land and resource management plans, and area plans should include ecological restoration goals and objectives to re-establish ecological integrity and maintain the adaptive capacity of ecosystems. Goals and objectives must be established within the framework defined by laws; Indian treaties and Tribal values and desires; regulations; public values and desires; natural range of variation (NRV); current and likely future ecological capabilities; a range of climate and other environmental change projections; the best available scientific information; and technical and economic feasibility to achieve desired conditions for National Forest System lands. Guidance and procedures for assessing ecological integrity and establishing goals and objectives for ecological restoration are included in Forest Service Handbook 1909.12, chapter 40. The directives for implementing the 2012 Land and Resource Management Planning Rule are being revised to include direction for ecological restoration consistent with the new planning rule.
- 3. Ecological restoration activities should be planned, authorized, implemented, monitored, and evaluated within the context of the NRV, current and desired conditions, and the potential for future changes in environmental conditions due to climate change and human uses. Some ecosystems may be damaged to such an extent that restoration may not be ecologically or economically possible. Where an environment has been irreversibly altered, restoration goals and activities will need to be adjusted accordingly to management ecosystems so that they are sustainable.

- 4. Where appropriate, ecological restoration should be integrated into resource management programs and projects to achieve complementary or synergistic results. Primary elements of an integrated approach are identification and elimination or reduction of stressors that degrade or impair ecological integrity. An integrated approach includes, where appropriate, taking actions that ensure long-term resilience even though there may be localized short-term adverse effects.
- 5. Resource managers shall consider collaboration across ownerships and jurisdictions to develop and achieve landscape-scale restoration objectives. Collaboration must include public involvement and consultation with Indian Tribes to effectively achieve restoration objectives.
- 6. Within existing authorities, revenue from commercial uses of natural resources may be used to help fund restoration activities.
- 7. Adaptive management, monitoring, and evaluation are essential for effectively achieving ecological restoration goals.

2020.4 – Responsibility

2020.41 - Chief

The Chief:

- 1. Retains overall authority over and responsibility for establishing national policy for ecological restoration of disturbed sites and degraded ecosystems.
- 2. Promotes cooperation and coordination between the Forest Service and other Federal agencies; State, Tribal and local governments; industry; partners; and the public for the development of restoration objectives.

3. Provides leadership across deputy areas to ensure the application of restoration, climate change, and risk management science is integrated into all Forest Service program areas.

# 2020.42 – Deputy Chief for National Forest System (NFS)

The Deputy Chief, NFS, is delegated the authority and responsibility for restoration of NFS lands in conformance with applicable Federal law, regulation, and policy. The Deputy Chief provides coordination across NFS program areas to ensure integrated and complementary program delivery. Authorities not delegated in the following sections to the regional foresters, forest and grassland supervisors, and district rangers are reserved to the Deputy Chief, NFS.

# 2020.43 – Washington Office Staff Directors

All Washington Office staff directors are delegated authority by the Chief and deputy chiefs to plan, develop, administer, monitor, and evaluate assigned programs. In carrying out this authority as it relates to strategic planning, staff directors shall be responsible for developing, executing, monitoring, reporting, and overseeing their program and activity areas incorporating, where appropriate, specific integrated ecological restoration policies and principles consistent with the authorities described in detail in their specific program titles, chapters, and sections of the Forest Service Manual.

# 2020.44 – Regional Forester

Regional foresters are responsible for:

1. Establishing regional policy for ecological restoration consistent with national policy.

- 2. Establishing direction and policy to ensure ecological restoration is integrated into regional programs and land management plans.
- 3. Coordinating with counterparts in other Federal agencies; State, county, and Tribal governments; private industry; and the public when developing and implementing ecological restoration programs and activities.
- 4. Delegating to forest and national grassland supervisors the authority to restore National Forest System lands.

### 2020.45 – Forest and Grassland Supervisors

Forest and Grassland supervisors are responsible for:

- 1. Implementing forest and grassland programs consistent with national and regional policy for ecological restoration.
- 2. Ensuring ecological restoration is considered and integrated, as appropriate, into forest and grassland programs and the land management plan.
- 3. Coordinating with counterparts in other Federal agencies; State, county, and Tribal governments; private industry; and the public when planning and implementing ecological restoration programs.

### 2020.46 – District Ranger

District rangers are responsible for development and approval of ecological restoration projects and to ensure they are consistent with national, regional, and forest policies.

### *2020.5 – Definitions*

Adaptive capacity. The ability of ecosystems to respond, cope or adapt to disturbances and stressors, including environmental change, to maintain options for

future generations. Adaptation includes, but is not limited to, maintaining primary productivity and basic ecological functions such as hydrologic and nutrient cycling. Adaption occurs primarily by organisms altering their interactions with the physical environment and other organisms. As applied to ecological systems, adaptive capacity is determined by:

- 1. Genetic diversity within species in ecosystems, allowing for selection of individuals with traits adapted to changing environmental conditions.
- 2. Biodiversity within the ecosystem, both in terms of species richness and relative abundance, which contributes to functional redundancies.
- 3. The heterogeneity and integrity of ecosystems occurring as mosaics within broader-scaled landscapes or biomes, making it more likely that some areas will escape disturbance and serve as source areas for re-colonization.

Adaptive management. A system of management practices based on clearly identified intended outcomes and monitoring to determine if management actions are meeting those outcomes, and, if not, to facilitate management changes that will best ensure that those outcomes are met or re-evaluated. Adaptive management stems from the recognition that knowledge about natural resource systems is sometimes uncertain.

<u>Disturbance</u>. Any relatively discrete event in time that disrupts ecosystem, watershed, community, or species population structure and/or function and changes resources, substrate availability, or the physical environment.

<u>Disturbance regime</u>. A description of the characteristic types of disturbance on a given landscape; the frequency, severity, and size distribution of these characteristic disturbance types; and their interactions.

**Ecological restoration**. See Restoration.

<u>Ecological Integrity</u>. The quality or condition of an ecosystem when its dominant ecological characteristics (for example, composition, structure, function, connectivity, and species composition and diversity) occur within the NRV and can withstand and recover from most perturbations imposed by natural environmental dynamics or human influence.

<u>Ecosystem</u>. A spatially explicit, relatively homogeneous unit of the Earth that includes all interacting organisms and elements of the abiotic environment within its boundaries. An ecosystem is commonly described in terms of its:

- (1) Composition. The biological elements within the different levels of biological organizations, from genes and species to communities and ecosystems.
- (2) Structure. The organization and physical arrangement of biological elements such as snags and down woody debris, vertical and horizontal distribution of vegetation, stream habitat complexity, landscape pattern, and connectivity.
- (3) Function. Ecological processes, such as energy flow; nutrient cycling and retention; soil development and retention; predation and herbivory; and natural disturbances such as wind, fire, and floods.
- (4) Connectivity. Ecological conditions that exist at several spatial and temporal scales that provide landscape linkages that permit the exchange of flow, sediments, and nutrients; the daily and seasonal movements of animals within home ranges; the dispersal and genetic interchange between

populations; and the long distance range shifts of species, such as in response to climate change.

**Ecosystem services**. Benefits people obtain from ecosystems, including:

Provisioning services - such as clean air and fresh water, as well as energy, fuel, forage, fiber, and minerals;

Regulating services - such as long-term storage of carbon; climate regulation; water filtration, purification, and storage; soil stabilization; flood control, and disease regulation;

Supporting services - such as pollination, seed dispersal, soil formation, and nutrient cycling; and

Cultural services - such as educational, aesthetic, spiritual, and cultural heritage values, recreational experiences, and tourism opportunities.

<u>Landscape</u>. A defined area irrespective of ownership or other artificial boundaries, such as a spatial mosaic of terrestrial and aquatic ecosystems, landforms, and plant communities, repeated in similar form throughout such a defined area.

Natural range of variation (NRV). Spatial and temporal variation in ecosystem characteristics under historic disturbance regimes during a reference period. The reference period considered should be sufficiently long to include the full range of variation produced by dominant natural disturbance regimes, often several centuries, for such disturbances as fire and flooding and should also include short-term variation and cycles in climate. "Natural range of variation" (NRV) is a term used synonymously with historic range of variation or range of natural variation. The NRV is a tool for assessing ecological integrity, and does not necessarily constitute a management target or desired condition. The NRV can help identify key structural, functional, compositional, and connectivity characteristics, for which plan

components may be important for either maintenance or restoration of such ecological

conditions.

Resilience. The capability of an ecosystem to endure disturbances and retain its

structure and functions; the capacity of an ecosystem, which is subject to disturbance or

change, to reorganize and renew itself.

Restoration. The process of assisting the recovery of an ecosystem that has been

degraded, damaged, or destroyed. Ecological restoration focuses on reestablishing the

composition, structure, pattern, and ecological processes necessary to facilitate terrestrial

and aquatic ecosystem sustainability, resilience, and health under current and future

conditions.

Stressors. Factors that may directly or indirectly degrade or impair ecosystem

composition, ecosystem structure or ecological processes in a manner that may impair its

ecological integrity, such as an invasive species, loss of connectivity, or the disruption of

a natural disturbance regime.

Sustainability. The capability to meet the needs of the present generation without

compromising the ability of future generations to meet their needs. Ecological

sustainability refers to the capability of ecosystems to maintain ecological integrity.

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